Gulf of Mexico Harmful Algal Bloom Bulletin

Region: AL/MS/FL

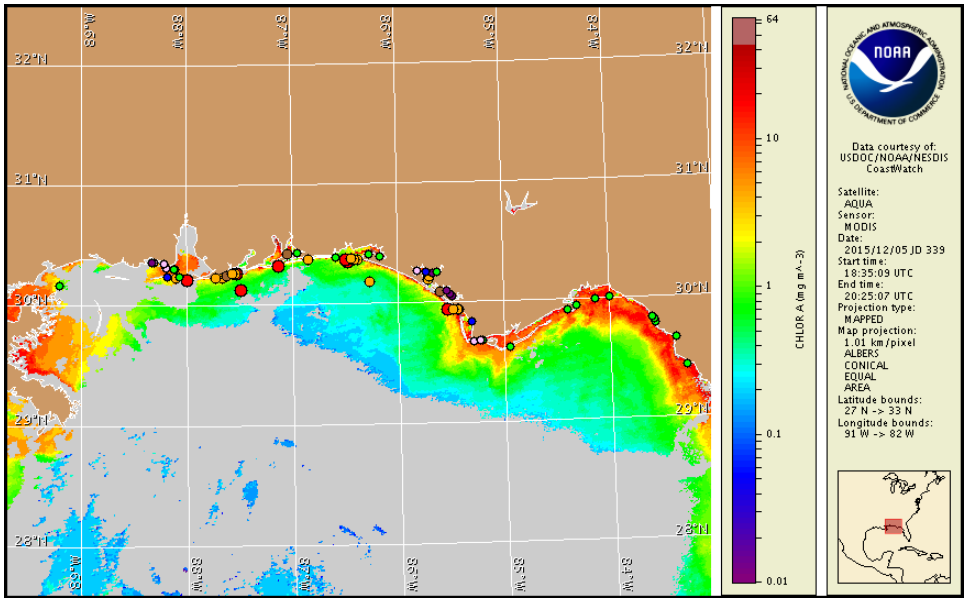
Monday, 07 December 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, December 3, 2015



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from November 27 to December 4: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Detailed sample information for Florida can be obtained through FWC Fish and Wildlife Research Institute at:

http://myfwc.com/redtidestatus

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit at: http://tidesandcurrents.noaa.gov/hab/bulletins.html

Conditions Report

Not present to high concentrations of *Karenia brevis* (commonly known as Florida red tide) are present along- and offshore Mobile and Baldwin counties in Alabama and portions of northwest Florida from Escambia to Gulf counties. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for alongshore Alabama and northwest Florida Monday, December 7 to Thursday, December 10 is listed below:

County Region: Forecast (Duration)
Mobile County: Moderate (M-Th)
Baldwin County: Low (M), High (Tu-Th)
Baldwin County, bay regions-Perdido Bay area Very Low (M-W), Low (Th)
Escambia County: Low (M), Moderate (Tu-W), High (Th)
Santa Rosa County: Low (M), Moderate (Tu-W), High (Th)
Santa Rosa County, bay regions: Low (M-Th)
Okaloosa County: Low (M), Moderate (Tu-W), High (Th)
Walton County: Very Low (M), Low (Tu-W), Moderate (Th)
Bay County: Very Low (M-Tu), Low (W-Th)
Bay County, bay regions: Moderate (M-Tu), Low (W-Th)
Gulf County: Very Low (M), Low (Tu-Th)
Gulf County, west bay regions-St. Joseph Bay area: Very Low (M-Th)
All Other NWFL County Regions: None expected (M-Th)
SWFL County Regions: Visit http://tidesandcurrents.noaa.gov/hab/#swfl

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Health information, from the Florida Department of Health and other agencies, is available at http://tidesandcurrents.noaa.gov/hab/hab_health_info.html. Reports of respiratory irritation have been received from Baldwin County, Alabama and Okaloosa, Escambia and Walton Counties in northwest Florida over the past several days. Reports of dead fish have also been received from Okaloosa, Escambia and Walton, and Bay, and Gulf Counties in northwest Florida.

Analysis

Samples collected from Alabama and northwest Florida indicate the presence of *Karenia brevis* alongshore from Mobile County, Alabama to Gulf County, Florida. Recent water samples confirm up to 'high' concentrations of *K. brevis* alongshore and in the bay regions of Baldwin County, Alabama, and Destin Beach in Okaloosa County, Florida (ADPH, FWRI; 11/28-12/2). Up to 'medium' concentrations are present at Dauphin Island in Mobile, Alabama, Miramar beach in Walton County, alongshore Mexico Beach and Grand Lagoon in Bay County in northwest Florida (ADPH, FWRI; 11/27-12/2). Up to 'low a' concentrations alongshore Okaloosa County and in the bay regions of Santa Rosa County in Florida (FWRI; 11/29-12/1). Offshore samples have detected *K. brevis* in 'high' concentrations approximately 1.6 miles northwest from Mexico Beach in Bay County, and 'medium' concentrations approximately. 9.1 miles offshore from Seaside in Walton County, Florida (FWRI; 11/27-28). Samples collected from Louisiana over the

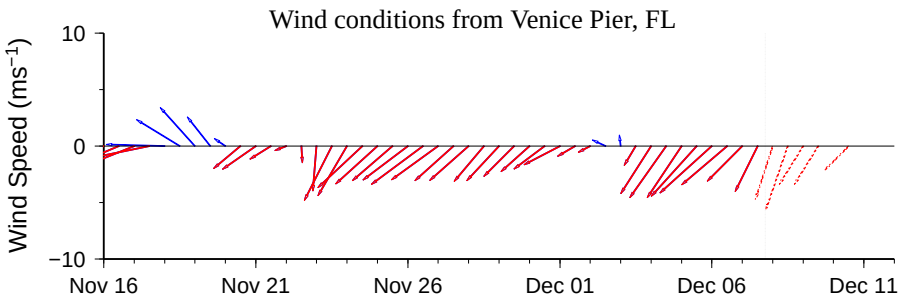
past few weeks indicate that *K. brevis* is 'not present' (FDA; 11/9-30). Detailed sample information and a summary of impacts can be obtained through FWC Fish and Wildlife Research Institute at: http://myfwc.com/redtidestatus.

Reports of respiratory irritation have been received from Baldwin County, Alabama and Okaloosa, Escambia and Walton Counties in northwest Florida over the past several days (FWRI; 12/2-12/7). Reports of dead fish have also been received from Okaloosa, Escambia and Walton Counties, St. Andrews Bay in Bay County, and St. Joseph Bayside in Gulf County in northwest Florida (FWRI, MDMR; 11/30-12/7). Additional sampling along- and offshore Louisiana and Mississippi is recommended to determine the extent of *K. brevis* in the region.

In recent ensemble imagery (MODIS Aqua, 12/5), patches of elevated to very high chlorophyll (2 to 19μg/L) with the optical characteristics of *K. brevis* are visible along- and offshore from Baldwin County in Alabama to Gulf County in northwest Florida.

Predominantly offshore winds are forecasted today and Tuesday, but winds shifting onshore Wednesday and Thursday will increase the potential for impacts at the coast along Alabama and northwest Florida.

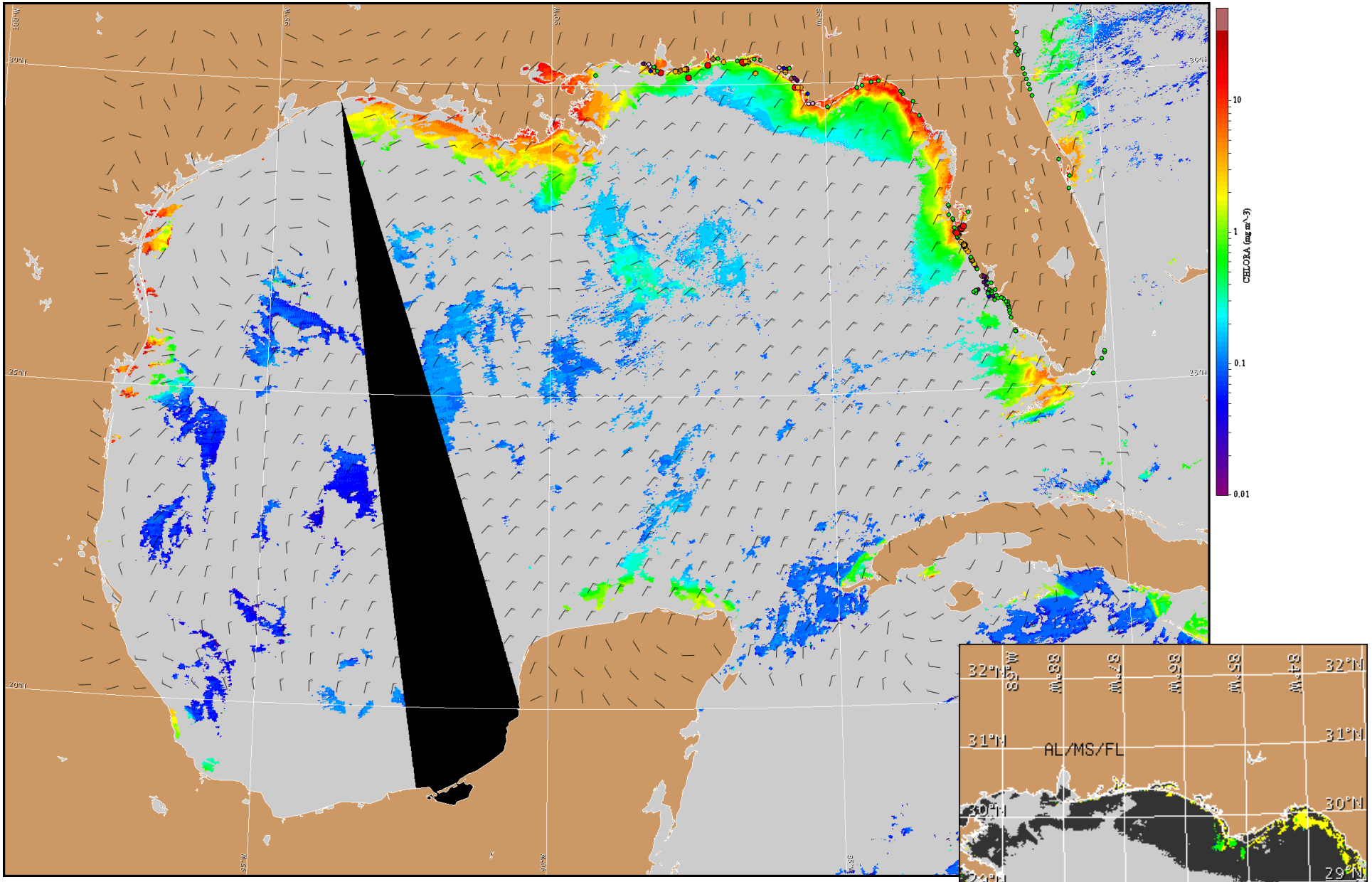
Keeney, Lalime, Kavanaugh



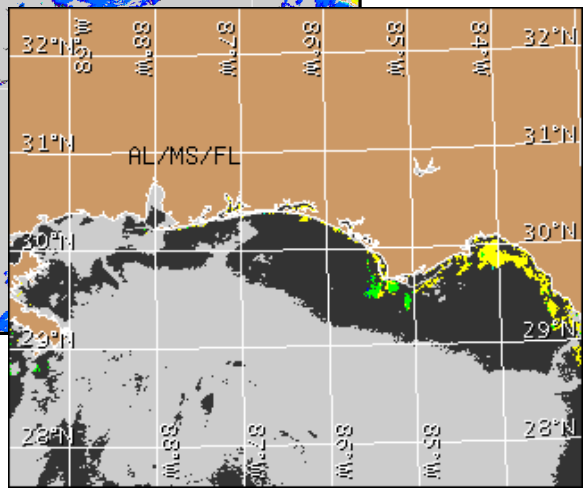
Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

Wind Analysis

Escambia to Gulf counties: Northeast to north winds (5-15kn, 3-8m/s) today and Tuesday. North to northwest winds (5kn, 3m/s) Wednesday. Northeast winds (5kn) Thursday, shifting southeast (5kn) in the late morning and afternoon Thursday.



Satellite chlorophyll image and forecast winds for December 8, 2015 12Z with points representing cell concentration sampling data from November 27 to December 4: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide: http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf



Verified and suspected HAB areas shown in red. Other areas with *K. brevis* optical characteristics shown in yellow (see p. 1 analysis for interpretation).